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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,243	07/28/2003	Lawrence D. Knox	02103-377003 / AABOSS14-C	6582
26162	7590	02/07/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			CULBRETH, ERIC D	
		ART UNIT		PAPER NUMBER
		3616		

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/629,243	KNOX ET AL.
Examiner	Art Unit	
Eric Culbreth	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 November 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) 8-19,23-67,70 and 72-78 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7,20-22,68,69 and 71 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8/22/05</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 8-19, 23-67, 70 and 72-78 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/22/05.

Although the election stated that claims 8-12, 23-26, 33-37, 65-67, and 70 also read on the elected embodiment, this is not accurate because those just mentioned claims either recite or depend from claims that recite determining or using trajectory, and the embodiment of Figure 2a does not include trajectory.

2. Applicant's election with traverse of Figure 2a in the reply filed on 11/22/05 is acknowledged. The traversal is on the ground(s) that some of the embodiments are only slightly different. This is not found persuasive because even the second paragraph of the 11/22/05 response states, for instance, that Figures 2a and 2b are "closely related", meaning they are different embodiments. Similarly, throughout the applicant's traverse, phrases like "closely related" and "either" are used, which is an admission by applicant that the embodiments are different. With eleven such different and alternative embodiments, it would be an undue burden on the examiner to locate and apply art to all the structure.

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

3. It is noted that this application appears to claim subject matter disclosed in prior Application No. 10/368,187, filed 2/18/03 and 09/535,849, filed 3/27/00. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be

accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Specifically, the first paragraph of page 1 of the specification should state this application is a continuation-in-part of the other applications, and not that it just "claims priority" to the mentioned applications.

4. Also, on page 1, line 4 “,now abandoned” should follow “2003”.

### *Drawings*

5. The drawings are objected to because of the following informalities. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

- a. On page 8, line 2 “10A, 10B” should be “10a, 10b” in order to be consistent with the drawings.
- b. Also regarding page 8, line 2 there is no brief description of Figure 10c.
- c. On page 8, line 4 “11A, 11C” should be “11a, 11c”.

- d. Contrary to page 12, line 18 reference numeral 14f' is not a suspension element.
- e. Reference numeral 47a (page 13, line 22) is not on the drawings.
- f. Reference numeral 47 refers to a point on page 15, line 2, and a plan on page 13, line 20; a reference numeral should only refer to one part of the invention.
- g. Figures 6a-6c are unclear because there are no arrows on the lines showing the direction of flow.
- h. Contrary to page 15, lines 8-16 reference numeral 58 is not in Figure 6a (possibly, this should be reference numeral 57).
- i. Reference numeral 56 (page 15, line 17) is not in Figure 6a; also, reference numeral 56 referred to a point, not a step, earlier in the specification.
- j. On page 26, line 31 "13oa" should be "130A" to be consistent with the drawings.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the profile storage device and microprocessor remote from the surface vehicle (claims 2-3 and 21-22) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
  
8. The disclosure is objected to because of the following informalities.  
Appropriate correction is required.
  - a. Page 3, lines 1-7 are an incomplete sentence.
  - b. Page 3, lines 18-31 are an incomplete sentence.

- c. Page 4, lines 1-8 are an incomplete sentence.
- d. Page 4, line 17 – page 5, line 4 are an incomplete sentence.
- e. Page 5, line 21 – page 6, line 6 is an incomplete sentence.
- f. Page 6, lines 7-23 are an incomplete sentence.
- g. Page 11, lines 4-5 and page 23, lines 12-13 are inaccurate to the invention in that the trajectory plan is not on the payload compartment.
- h. Page 11, lines 6 and 9 would not appear to be accurate in reciting points in the payload compartment.
- i. Page 12, lines 15-17 are reversed (part 18f does not exert a force to shorten distance).
- j. On page 12, line 18 “maximum lower limit” should apparently be “maximum upper limit”.
- k. On page 21, line 1 the comma (”,”) should be a semi-colon (;) (currently, it is an incomplete sentence).
- l. On page 24, line 26 a period should follow “120”.
- m. On page 26, line 24 “experienced” should apparently be “experience”.
- n. Page 26, line 30 does not make sense (“spreads the a... ”).

9. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: There is no support in the specification for claims 2-3 and 21-22 (the profile storage device and microprocessor remote from the vehicle).

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-7, 20-22, 68-69 and 71 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding page 11, line 30 and the remainder of the specification and claims, it is not clear what the difference is between a "profile" and a "trajectory plan"; in fact, it is not clear from the specification what is meant by "trajectory".

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 4, 20-22, 68-69 and 71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 4 is not accurate to the invention as disclosed in reciting the microprocessor as adapted to determine if there is a stored profile corresponding to the location.

- b. In claim 20, line 5 "a" should precede "road profile".
- c. In claim 68, line 8 there is no antecedent basis for "said road engaging device".

***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1, 4-5, 68-69 and 71 as best understood are rejected under 35 U.S.C. 102(b) as being anticipated by Schubert et al (US005899288A).

Schubert et al discloses a surface vehicle 2 with a payload compartment or cab 6 and a surface engaging device 22. A controllable suspension element 28 applies a force between cab 6 and surface engaging device 22. Note column 15, line 14 – column 17, line 24 where the system uses GPS sensors and computerized stored maps or profiles of where it intends to go to adjust the force of an active suspension between a payload or cab and road surface. This would be a profile storage device (the computer storing maps) including vertical deflection data (bumpiness of surface to be traveled over) and a profile retrieving microprocessor coupled to the suspension element and profile storage device for retrieving the one of the profiles on which the vehicle is traveling (circuit 222 which receives information about the maps and controls the suspension, which would be a microprocessor) (claim 1). Regarding claim 4, as

functionally recited the GPS sensors are a locator system coupled to the microprocessor determining the location of the vehicle and adapted to determine if there is a stored profile or map corresponding to the location. Regarding claim 5 sensor 34a acquires vertical deflection data. Regarding claims 68-69, at Schubert et al (288), column 15, lines 31-37 predictive control signals to improve ride quality are empirically determined (i.e., bumpiness or vertical travel is predicted by previously empirically determining the contour of the road, which would involve driving over it). As noted above, maps or profiles are stored and retrieved (claim 71).

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. Claims 2-3 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Schubert et al (288).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schubert et al to include the storage retrieval device and microprocessor remote from the vehicle as an obvious matter of design choice, as the specification gives no stated reason or particular purpose for the remote locations of the systems, and the invention would appear to work just as well whether the device and microcomputer are remote from the vehicle or on it.

***Allowable Subject Matter***

19. Claims 6-7 and 21-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20. Claim 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric Culbreth  
Primary Examiner  
Art Unit 3616

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